

### **REMARKS**

The present Amendment amends claim 3, cancels claims 7, 8, 13 and 15, and leaves claims 2, 4, 9-12 and 17-19 unchanged. Therefore, the present application has pending claims 2-4, 9-12 and 17-19.

Claim 3 was amended to include the features of claims 7 and 8 (now canceled). Accordingly, the scope of the claims has not changed.

### **35 U.S.C. §103 Rejections**

**Claim 13** stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 7,185,054 to Ludwig et al. ("Ludwig") in view of U.S. Patent No. 6,437,758 to Nielsen et al. ("Nielsen"). As previously indicated, claim 13 was canceled. Therefore, this rejection regarding claim 13 is rendered moot.

**Claims 2-4, 7-12 and 17-19** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ludwig in view of U.S. Patent No. 6,542,165 to Ohkado, and further in view of Nielsen. As previously indicated, claims 7 and 8 were canceled. Therefore, this rejection regarding claims 7 and 8 is rendered moot. This rejection regarding the remaining claims 2-4, 9-12 and 17-19 is traversed for the following reasons. Applicants submit that the features of the present invention, as now more clearly recited in claims 2-4, 9-12 and 17-19, are not taught or suggested by either of Ludwig, Ohkado or Nielsen, whether taken individually or in combination with each other in the manner suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to the claims to more clearly describe features of the present invention. Specifically, amendments were made to the claims to more

clearly recite that the present invention is directed to a communication system as recited, for example, in independent claim 3.

The present invention, as recited in claim 3, provides a communication system including a network, and at least two terminal units connected thereto. According to the present invention, each terminal unit includes session controlling means for controlling a session for enabling transmission/receiving of voice, image, and handwritten data to/from a remote terminal unit individually. Each terminal unit also includes display means for displaying the image and the handwritten data, where the image data and the handwritten data are overlapped and displayed on a display of the display means. Also included in each terminal unit is an image/handwritten data managing means for managing image/handwritten data, where the image/handwritten data managing means has a plurality of planes, and where the managing means displays basic image data on one of the plurality of planes, the one of the plurality of planes being an image data plane, and displays handwritten data currently handled in communication on a different plane, the different plane being a handwritten data plane, so that image and handwritten data are displayed so as to overlap each other by putting the different planes in layers.

According to the present invention, the session controlling means includes means for starting and ending voice communication, image communication and handwritten data communication independently. Also according to the present invention, the means for starting and ending voice communication, image communication and handwritten data communication independently is configured to make at least one of the image communication, handwritten data communication, and voice communication at a high quality, and end other communications even when a through-put of the terminal unit or a number of communication bands is

insufficient.

Also according to the present invention, each terminal unit further includes: an erasing/information transmitting means; and an erasing/information receiving means. The erasing/information transmitting means erases image and handwritten data from the display means through the image/handwritten data managing means and transmits erasure information to the remote terminal unit, where in the terminal unit, the erasing/information transmitting means can select either image or handwritten data or both of image and handwritten data as an object to be erased and erase a selected object from the display means. The erasing/information receiving means erases image and handwritten data from the display means through the image/handwritten data managing means according to the erasure information from the remote terminal unit, where in the terminal unit, the erasing/information transmitting means notifies the remote terminal unit of completion of the object erasure in return for the erasure information so that the remote terminal erases the object from its display means according to the notice. The prior art does not disclose all of the above described features.

The above described features of the present invention, as now more clearly recited in the claims, are not taught or suggested by any of the references of record. Specifically, the features are not taught or suggested by either Ludwig or Ohkado, whether taken individually or in combination with each other.

Ludwig teaches participant display and selection in video conference calls. However, there is no teaching or suggestion in Ludwig of the communication system as recited in claim 3 of the present invention.

One feature of the present invention, as recited in claim 3, includes where wherein the means for starting and ending voice communication, image

communication and handwritten data communication independently is configured to make at least one of the image communication, handwritten data communication, and voice communication at a high quality, and end other communications even when a through-put of the terminal unit or a number of communication bands is insufficient. Ludwig does not disclose this feature, and the Examiner does not rely upon Ludwig for teaching this feature.

Other features of the present invention, as recited in claim 3, include where each terminal unit further includes: an erasing/information transmitting means; and an erasing/information receiving means. The erasing/information transmitting means erases image and handwritten data from the display means through the image/handwritten data managing means and transmits erasure information to the remote terminal unit, where in the terminal unit, the erasing/information transmitting means can select either image or handwritten data or both of image and handwritten data as an object to be erased and erase a selected object from the display means. The erasing/information receiving means erases image and handwritten data from the display means through the image/handwritten data managing means according to the erasure information from the remote terminal unit, where in the terminal unit, the erasing/information transmitting means notifies the remote terminal unit of completion of the object erasure in return for the erasure information so that the remote terminal erases the object from its display means according to the notice. Ludwig does not disclose this combination of features.

The Examiner relies upon Ludwig for teaching these features (see rejection of claims 7 and 8, now canceled). However, the present invention is quite different from Ludwig. In the present invention, session controlling means include a means for controlling a session for enabling transmission/receiving voice, image and

handwritten data to/from a remote terminal unit individually. The means is configured to make at least one of the image communication, handwritten data communication, and voice communication at a high quality, and end other communication, even when a throughput of the terminal unit or a number of communication bands is insufficient.

Also in the present invention, an image/handwritten data managing means has a plurality of planes, and the managing means display basic image data on one of the plurality of planes, the one of the plurality of planes being an image data plane, and displays handwritten data currently handled in communication on a different plane, where the different plane is a handwritten data plane, so that image and handwritten data are displayed so as to overlap each other by putting the different planes in layers. A plurality of planes being image/handwritten data planes is erased according to the erase command information from the remote terminal unit.

The Examiner relies upon Ludwig for teaching where image/handwritten data planes are erased according to the erase command information from the remote terminal unit. However, Ludwig only teaches sharing the image/handwritten data of a plurality of planes and replacing the erasing data of a plane from among a plurality of participants.

Therefore, Ludwig fails to teach or suggest “wherein said means for starting and ending voice communication, image communication and handwritten data communication independently is configured to make at least one of the image communication, handwritten data communication, and voice communication at a high quality, and end other communications even when a through-put of the terminal unit or a number of communication bands is insufficient” as recited in claim 3.

Furthermore, Ludwig fails to teach or suggest “wherein each terminal unit

further comprises:

erasing/information transmitting means for erasing image and handwritten data from the display means through the image/handwritten data managing means and transmitting erasure information to the remote terminal unit,

wherein in the terminal unit, the erasing/information transmitting means can select either image or handwritten data or both of image and handwritten data as an object to be erased and erase a selected object from the display means; and

an erasing/information receiving means for erasing image and handwritten data from the display means through the image/handwritten data managing means according to the erasure information from the remote terminal unit,

wherein in the terminal unit, the erasing/information transmitting means notifies the remote terminal unit of completion of the object erasure in return for the erasure information so that the remote terminal erases the object from its display means according to the notice” as recited in claim 3.

The above noted deficiencies of Ludwig are not supplied by any of the other references of record, namely Ohkado, whether taken individually or in combination with each other. Therefore, combining the teachings of Ludwig and Ohkado in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Ohkado teaches a system, apparatus and method of relating annotation data to an application window. However, there is no teaching or suggestion in Ohkado of the communication system as recited in claim 3 of the present invention.

Ohkado discloses a system, apparatus and method for generating a transparent window on an application window designated by an operator. An

annotation is drawn in the transparent window depending on the kind of message generated on the transparent window. Ohkado's system can be used in collaborating with another terminal located in a remote location. There are a scheme in which a window of an application to be collaborated and a transparent window corresponding thereto are started in the both systems and only the data such as an image drawn on the transparent window is transmitted to the collaborating system and another scheme in which an application to be collaborated is run only on one of the systems and an image merging the annotation data is transmitted to the other system.

One feature of the present invention, as recited in claim 3, includes where wherein the means for starting and ending voice communication, image communication and handwritten data communication independently is configured to make at least one of the image communication, handwritten data communication, and voice communication at a high quality, and end other communications even when a through-put of the terminal unit or a number of communication bands is insufficient. Ohkado does not disclose this feature, and the Examiner does not rely upon Ohkado for teaching this feature.

Other features of the present invention, as recited in claim 3, include where each terminal unit further includes: an erasing/information transmitting means; and an erasing/information receiving means. The erasing/information transmitting means erases image and handwritten data from the display means through the image/handwritten data managing means and transmits erasure information to the remote terminal unit, where in the terminal unit, the erasing/information transmitting means can select either image or handwritten data or both of image and handwritten data as an object to be erased and erase a selected object from the display means. The erasing/information receiving means erases image and handwritten data from

the display means through the image/handwritten data managing means according to the erasure information from the remote terminal unit, where in the terminal unit, the erasing/information transmitting means notifies the remote terminal unit of completion of the object erasure in return for the erasure information so that the remote terminal erases the object from its display means according to the notice. Ohkado does not disclose this combination of features, and the Examiner does not rely upon Ohkado for teaching this combination of features (see rejection of claims 7 and 8, now canceled).

Therefore, Ohkado fails to teach or suggest “wherein said means for starting and ending voice communication, image communication and handwritten data communication independently is configured to make at least one of the image communication, handwritten data communication, and voice communication at a high quality, and end other communications even when a through-put of the terminal unit or a number of communication bands is insufficient” as recited in claim 3.

Furthermore, Ohkado fails to teach or suggest “wherein each terminal unit further comprises:

erasing/information transmitting means for erasing image and handwritten data from the display means through the image/handwritten data managing means and transmitting erasure information to the remote terminal unit,

wherein in the terminal unit, the erasing/information transmitting means can select either image or handwritten data or both of image and handwritten data as an object to be erased and erase a selected object from the display means; and

an erasing/information receiving means for erasing image and handwritten data from the display means through the image/handwritten data managing means according to the erasure information from the remote terminal unit,



wherein in the terminal unit, the erasing/information transmitting means notifies the remote terminal unit of completion of the object erasure in return for the erasure information so that the remote terminal erases the object from its display means according to the notice” as recited in claim 3.

The above noted deficiencies of Ludwig and Ohkado are not supplied by any of the other references of record, namely, Nielsen whether taken individually or in combination with each other. Therefore, combining the teachings of Ludwig and Ohkado in the manner suggested by the Examiner still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Nielsen teaches a method and apparatus for eyetrack-mediated downloading. However, there is no teaching or suggestion in Nielsen of the communication system as recited in claim 3 of the present invention.

Nielsen discloses an apparatus, methods, systems and computer program products that use gaze-tracking devices to determine an area of a display screen of most interest to a user. If that area of interest has a bandwidth allocation, the apparatus increases that allocation. Thus, the data transfers of interest to the user receive a larger bandwidth allocation than the data transfers that do not interest the user.

One feature of the present invention, as recited in claim 3, includes where wherein the means for starting and ending voice communication, image communication and handwritten data communication independently is configured to make at least one of the image communication, handwritten data communication, and voice communication at a high quality, and end other communications even when a through-put of the terminal unit or a number of communication bands is insufficient. Nielsen does not disclose this feature.

Contrary to the Examiner's assertions, Nielsen merely teaches allocating bandwidth to a data stream supplying data to an area of interest. That is to say, Nielsen does not teach ending other communication even when a throughput of the terminal unit or a number of communication bands is insufficient.

Other features of the present invention, as recited in claim 3, include where each terminal unit further includes: an erasing/information transmitting means; and an erasing/information receiving means. The erasing/information transmitting means erases image and handwritten data from the display means through the image/handwritten data managing means and transmits erasure information to the remote terminal unit, where in the terminal unit, the erasing/information transmitting means can select either image or handwritten data or both of image and handwritten data as an object to be erased and erase a selected object from the display means. The erasing/information receiving means erases image and handwritten data from the display means through the image/handwritten data managing means according to the erasure information from the remote terminal unit, where in the terminal unit, the erasing/information transmitting means notifies the remote terminal unit of completion of the object erasure in return for the erasure information so that the remote terminal erases the object from its display means according to the notice. Nielsen does not disclose this combination of features, and the Examiner does not rely upon Nielsen for teaching this combination of features (see rejection of claims 7 and 8, now canceled).

Therefore, Nielsen fails to teach or suggest "wherein said means for starting and ending voice communication, image communication and handwritten data communication independently is configured to make at least one of the image communication, handwritten data communication, and voice communication at a

high quality, and end other communications even when a through-put of the terminal unit or a number of communication bands is insufficient” as recited in claim 3.

Furthermore, Nielsen fails to teach or suggest “wherein each terminal unit further comprises:

erasing/information transmitting means for erasing image and handwritten data from the display means through the image/handwritten data managing means and transmitting erasure information to the remote terminal unit,

wherein in the terminal unit, the erasing/information transmitting means can select either image or handwritten data or both of image and handwritten data as an object to be erased and erase a selected object from the display means; and

an erasing/information receiving means for erasing image and handwritten data from the display means through the image/handwritten data managing means according to the erasure information from the remote terminal unit,

wherein in the terminal unit, the erasing/information transmitting means notifies the remote terminal unit of completion of the object erasure in return for the erasure information so that the remote terminal erases the object from its display means according to the notice” as recited in claim 3.

Each of Ludwig, Ohkado and Nielsen suffer from the same deficiencies, relative to the features of the present invention, as recited in the claims. Therefore, combining the teachings of Ludwig, Ohkado and Nielsen in the manner suggested by the Examiner does not render obvious the features of the present invention as now more clearly recited in the claims. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §103(a) rejection of claims 2-4, 7-12 and 17-19 as being unpatentable over Ludwig in view of Ohkado, and further in view of Nielsen, are respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references used in the rejection of claims 2-4, 9-12 and 17-19.

**Claim 15** stands rejected under 35 U.S.C. §103(a) as being unpatentable over Ludwig in view of U.S. Patent No. 6,624,827 to Hwang et al. ("Hwang"), and further in view of Nielsen. As previously indicated, claim 15 was canceled. Therefore, this rejection regarding claim 15 is rendered moot.

In view of the foregoing amendments and remarks, Applicants submit that claims 2-4, 9-12 and 17-19 are in condition for allowance. Accordingly, early allowance of claims 2-4, 9-12 and 17-19 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (referencing Attorney Docket No. 501.42868X00).

Respectfully submitted,

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